

Appl. No. 10/799,204
Amdt. Dated December 12, 2006
Reply to Office Action of September 28, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled) A method comprising:
coating a surface of a thermally conductive heat spreader body with an organic surface protectant; and
coupling the heat spreader body to a thermal interface material, the thermal interface material being in contact with an integrated circuit (IC) die.
2. (currently amended) The A method of claim 1, comprising:
coating a surface of a thermally conductive heat spreader body with an organic surface protectant (OSP); and
coupling the heat spreader body to a thermal interface material, the thermal interface material being in contact with an integrated circuit (IC) die;
wherein the coating comprises dipping the heat spreader body in a solution comprising the organic surface protectant OSP.
3. (currently amended) The method of claim ~~[[1]]~~ 2, wherein the ~~organic surface protectant OSP~~ OSP comprises one or more triazole compounds and/or salts thereof.
4. (canceled)
5. (currently amended) The method of claim ~~[[1]]~~ 2, wherein the thermal interface material is a solder or solder-polymer hybrid.
6. (currently amended) The method of claim ~~[[1]]~~ 2, further comprising coating the surface of the heat spreader body with a material before coating with the ~~organic surface protectant OSP~~ OSP.
7. (currently amended) The method of claim ~~[[1]]~~ 2, wherein the heat spreader body comprises a thermally conductive metal or alloy.
- 8-23. (canceled)

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24. (currently amended) The method of claim [[1]] 2, wherein the coating comprises spraying the heat spreader body with a solution of the ~~organic surface protectant~~ OSP.
25. (currently amended) The method of claim [[7]] 6, wherein the material is nickel or paladium.
26. (currently amended) The method of claim [[1]] 2, prior to coating the surface of the heat spreader body, further comprising:
cleaning the heat spreader body;
micro-etching the heat spreader body in an acid solution to provide a texture to the surface; and
rinsing the heat spreader body in one of water and acid.
27. (previously presented) The method of claim 7, after coating the surface of the heat spreader body, further comprising:
rinsing the coated heat spreader body in de-ionized water; and
drying the coated heat spreader body.
28. (new) The method of claim 2, wherein the OSP comprises one or more substituted or unsubstituted imidazole compounds.
29. (new) The method of claim 2, wherein the OSP comprises a liquid, a solid, or a mixture of liquid and solid.
30. (new) The method of claim 2, wherein the OSP is blended with a co-solvent.
31. (new) The method of claim 2, wherein coating the surface with the OSP comprises:
coating the surface of the thermally conductive heat spreader body with the OSP to a thickness ranging from 0.1 μm to 1.0 μm .
32. (new) The method of claim 2, further comprising:
heating the solution.
33. (new) The method of claim 32, wherein heating the solution comprises:
heating the solution to a temperature from 35°C to 50°C.